

University of Arizona

Student Satellite Program

# Two Satellites, One Vision

- Rincon Sat
- FfizE Sat
- Crawl, Walk, Run, and Fly to Mars

# Program Organization

## Industry Partners

Alcatel

Honeywell

Raytheon

Rincon Research

TRW

## Space Grant

### Steering Committees

10 faculty

1 grad

### FfizE Sat

2 faculty

2 grad

6 undergrad

### Rincon Sat

6 faculty

3 industry mentors

4 grad

20 undergrad

### CubeSat X Teams

2 faculty

2 grad

8 undergrad

# Rincon Sat

- Design and test satellite subsystems
  - power board and solar cells
  - control board, real-time operating system
  - magnetic attitude stabilization
  - ground control & radio communication
  - beacon
  - current, voltage, & temperature sensors
- Infer attitude using solar cell current

# FfizE Sat

- Components include
  - retroreflectors
  - beacon
  - temperature & photosensors
  - magnetic and gravity gradient attitude control
- Establish feasibility of measuring electrical charging via direct orbit displacements
- Test attitude control & thermal models

# Testing Fresnel-Fizeau Effect and Relativity

*Improved Aberration Angle  
Measurement Method*

